

Notice of Allowability

Application No.

09/981,613

Examiner

LINH BLACK

Applicant(s)

SINCLAIR ET AL.

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/12/06.
2. ☒ The allowed claim(s) is/are 14, 38 and 39.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



DON WONG

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Howard L. Speight (Reg. 37,733) on December 21, 2006.

The application has been amended as follows:

The claims have been amended as follows:

cancel: claim 40.

add: after the limitation: "the first value of the row ID is predominate in determining the order of the rows in the storage facilities and the second value determines the order of those rows with identical first value" of claim 14, "the second value being the result of applying a hash function to a value in at least one specified column".

The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach the combination of limitations of the independent claim 14, particularly: "the first value of the row ID is predominate in determining the order of the rows in the storage facilities and the second value determines the order of those rows with identical first value, the second value being the result of applying a hash function to a value in at least one specified column;"

Kruglikov et al. (US 6105026) teach:

a partition database system comprising: a plurality of storage facilities, each storage facility including data representing a plurality of table rows - fig. 1, elements 110-130 (each partition/segment of table rows of a table is equivalent to a storage facility); col. 1, lines 1-64 (...the different partitions

may reside on physically separate disk drives in the database system – col. 1, lines 62-64). Thus, each disk drive can store at least a partition or table rows.

wherein table rows in each storage facility that correspond to a specific table are logically ordered according a row identifier (row ID) – fig. 1, ID#.

the first value of the row ID is predominate in determining the order of the rows in the storage facilities - fig. 1, ID#.

Kruglikov et al. teach each partition or storage facility comprising:

- the first value based on ONE or more columns of the table, and is predominate in determining the order of the rows in the storage facilities – fig. 1, ID#.
- the second value based on ONE or more columns of the table – fig. 1, HIRE DATE.

table rows are distributed among the plurality of storage facilities based on the second value – fig. 1, HIRE DATE; col. 1, lines 19-25.

Kruglikov et al. do not teach a row ID, which comprises a first and a second value, and the second value determines the order of those rows with identical first values.

Tow et al. teach "method and apparatus of enforcing uniqueness of a key value for a row a data table" – the title.

Tow et al. teach: "The term "value" is used to refer to the contents of row-column, whether numerals, characters, symbols, dates, raw byte strings, etc., or any combination thereof" – col. 2, lines 38-40; "In some databases, mutiple columns are used as keys. In table 210 of FIG. 2, for example, it might be possible for **the CUSTOMER NUMBER value** to be the same for two different rows, but for the combination of the CUSTOMER number value and the CUSTOMER NAME value to be unique in each row.

This is illustrated more generally by table 410 of FIG. 4, in which a key value in any given row of the table spans more than one column." - col. 2, lines 32-56. Thus, a row ID comprises different columns' values are not novel in the art. Tow et al. also teach: "row ID comprises a first value based on one or more columns of the table and a second value based on one or more columns of the table" - fig. 4, table 410 with a unique key spans all N columns. Thus, the rowID can comprise: "a first value based on one or more columns of a table and a second value based on one or more columns of the table" - col. 4, lines 57-62; col. 5, lines 10-16.

Tow et al. also teach in fig. 2, the CUSTOMER NUMBER column contains CUSTOMER IDENTIFICATION NUMBERS can be the same for two

different rows, and this column determines the order of the rows – col. 2, lines 49-56; fig. 2, item 214.

However, the combination of Kruglikov et al.'s teaching and Tow et al.'s teaching do not disclose the combination of limitations of the independent claim 14, particularly: "the first value of the row ID is predominate in determining the order of the rows in the storage facilities and the second value determines the order of those rows with identical first value, the second value being the result of applying a hash function to a value in at least one specified column;"

Dependent claims 38-39 incorporate the listed limitations by reference and contain limitations that further distinguish over the art of record. For these reasons, claims 38-39, are considered allowable over the art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 571-272-4106. The examiner can normally be reached on Mon.-Thurs..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LINH BLACK
Examiner
Art Unit 21633

December 21, 2006



DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100